

SHGTP

Geospatial Technology Pathway
A Santa Rosa City Schools Career Pathway at Piner High School



A New Pathway at Piner High School

Map Your Future!

Geospatial Technology Pathway at Piner

Welcome and thank you for your interest in Piner High School's Geospatial Technology Pathway. We are excited to bring this unique opportunity to Santa Rosa City School Students. The Geospatial Technology Pathway is led and taught by the same people who created and designed it, Ms. Erickson and Mr. Kruger.

We truly believe that this is an amazing learning opportunity that will motivate students into new career and educational opportunities. Students will experience the latest GIS technology in our new GIS lab along with our GPS field computers, and survey equipment. Students will learn a valuable skill while applying science, math and technology concepts in a supportive, engaging environment that includes fieldwork and authentic projects. Ms. Erickson and I have over 33 years of teaching experience and we look forward to making your educational experience valuable and rewarding.

Kurt Kruger
Program Coordinator/GTP Instructor

Kristi Erickson
GTP Instructor

What Local Experts are Saying...

"It's the fastest growing industry you've never heard of - geospatial technology"

– *The Press Democrat 11/12/2007*

"Students who invest time into learning how to use GIS software, gain an extremely valuable asset in today's employment market"

– *Tim Pudoff*
Sonoma County GIS Manager/ Information Systems Department

"GIS/GPS...career opportunities are growing at quantum leaps as environmental issues take on new urgency in this new millennium. ENVIRON International Corporation is pleased to support Piner High School..."

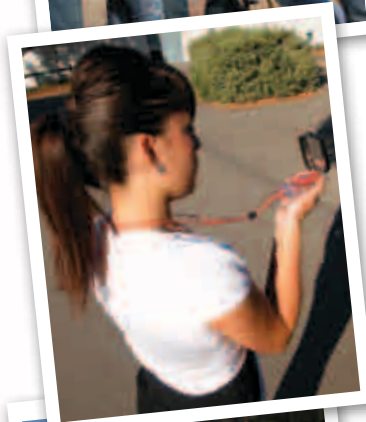
– *Chris Emery*
Senior Manager, EnvironCorp Meteorologist

"Sonoma State University's Physics & Astronomy Department and SSU's NASA Education and Public Outreach group is excited to support Piner High School...providing opportunities to get students interested in Science, Math and Technology..."

– *Lynn Cominsky*
Professor and Chair, Physics and Astronomy and Program Director, NASA E/PO at SSU

"Land surveyors, civil engineers, urban planners, municipal public works and utility departments, law enforcement, fire departments and emergency medical responders are a few of the long list of people who utilize GIS...As a Piner Alumni, I am excited to donate time to Mr. Kruger's and Ms. Erickson's students"

– *Anthony G. Cinquini P.E.*
Professional Civil Engineer and Piner High School graduate, Class of 1993



Who may participate in the GTP program?

The Geospatial Technology Pathway is aimed at students who are curious, enjoy science, math and technology, are excited about project-based learning and willing to complete a 3 year integrated program. We are looking for a diverse cross-section of Piner's students. You do not have to be a straight "A" student (but can be!).

Most important is that you are inquisitive, have a good work ethic and possess a passion and excitement for exploration and hands on learning. You will not only learn Science, Math and Technology, but gain skills that will take you into the workforce, certificate programs or further College/University education. Your experience begins in the GIS lab; moves out into the community for data collection and applied independent projects, and finally a third year internship.

GTP Goals:

- ◆ To make Science, Technology, Engineering and Mathematics (STEM) relevant and approachable to students by linking the standards based content to real world application and/or vocations.
- ◆ Encourage students to participate in the scientific process by providing real, authentic, community based GIS, Astronomical, Meteorological and Seismological research projects which link directly with a variety of vocational and/or educational opportunities.
- ◆ To provide students with the tools necessary to integrate science, math and technology so they may perform authentic research.
- ◆ Prepare students for both a career and/or higher education in Science, Math and Technology. Provide a collaboration and integration between science, technology, students, parents, teachers, school, and community

Frequently Asked Questions



How does GIS affect my everyday life?

You may not realize it, but **GIS** is used by many professionals to solve problems that impact your everyday life. Whether it's the regular delivery of your morning newspaper, supplying water to your home for your morning shower, supplying electricity for you to cook your breakfast, or the synchronization of traffic lights on your way to school, **GIS** likely had a hand in making these things happen. All over the world, organizations are using **GIS** to manage the environment, work more efficiently, make important decisions, and save money.

What is Geospatial Science?

Simply said, Geospatial Science is the science of collecting and making data usable to the average person by revealing trends, patterns, or phenomena through computer based analysis and digital mapping techniques (GIS).

What is GIS?

GIS stands for Geographic Information System. GIS is a collection of computer hardware, software, and geographic data for capturing, managing, analyzing, and displaying all forms of geographically referenced information.

What is GPS?

GPS stands for Global Positioning System. This is the "spatial" component of "Geospatial". GPS allows real-time positional data collection used to create GIS maps in ArcGIS computer software. Students use handheld GPS devices to collect positional data to be analyzed in our lab.

What is a "Pathway"?

A Pathway is simply a 2 or 3-year elective program that focuses on a specific vocational field. The goal of pathways is to expose students to an area of study that may spark an interest that will focus their vocational and/or educational goals after high school.

Why the Geospatial Technology Pathway?

This pathway is designed to get students involved in the process of applied science, math, engineering and technology. We want students to engage in exploring their interests in these areas as they formulate their future career and educational goals. Career outlooks for these sectors are extremely positive.

What will GTP do for me?

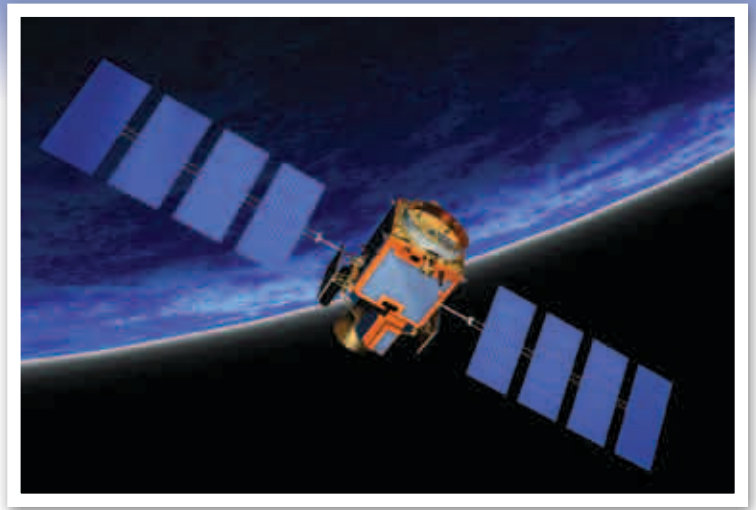
GTP will provide you with an opportunity to explore a field of study that has tremendous employment opportunities and has application to many other career fields. It is an interactive and thoughtful discipline that will finally answer the question, "why are we learning this?"

Do I have to want to be a GIS Tech, Scientist, Computer Specialist, Engineer or Surveyor?

No. Students in GTP should have an interest in the sciences, math and technology but our goal is to expose students to these fields so they can explore their interests. GTP will give students a strong background in these fields that can be used to enter certificate programs, Community, State or UC systems.

Can I be in the College Magnet program or University Pathway at the same time as GTP?

Yes, students may participate in both programs concurrently.



Geospatial Technology Pathway Course Sequence*

Year 1 - Introductory:

- **GIS I:** Maps, Orienteering/GPS and Physical Geography

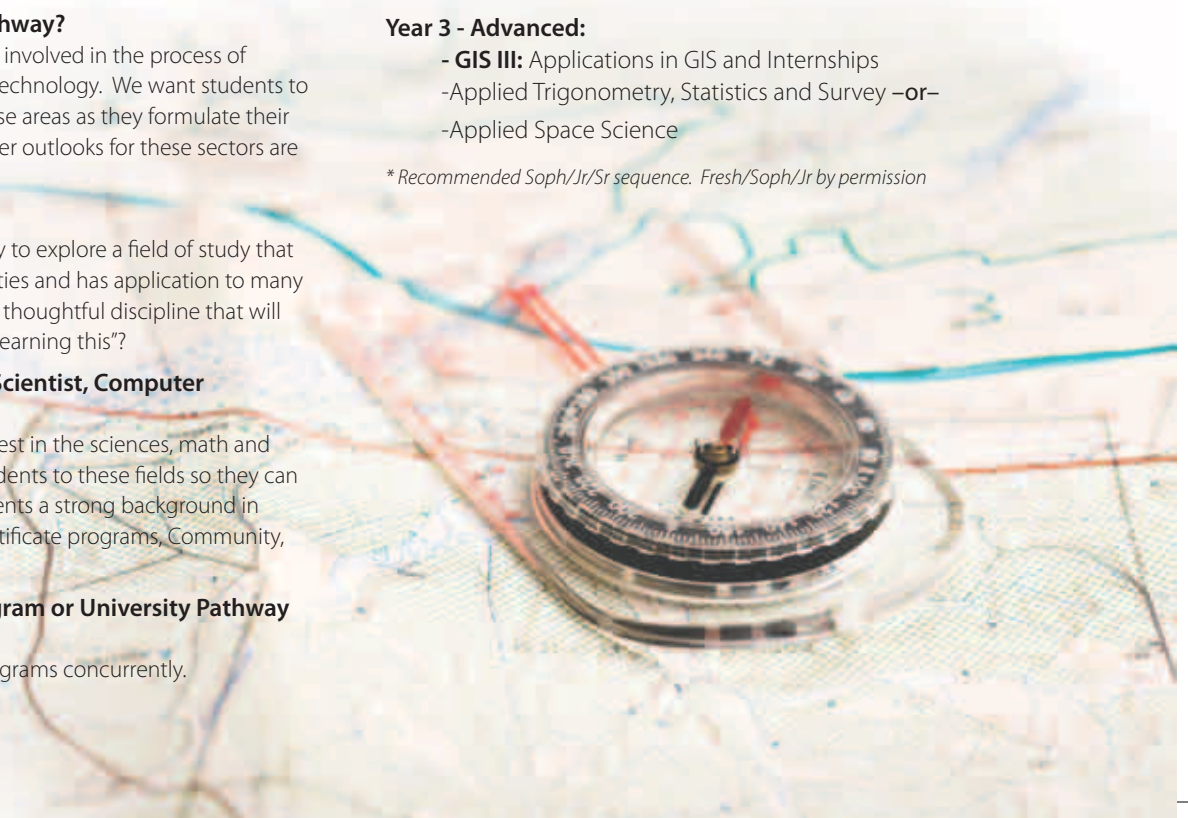
Year 2 - Skill Building:

- **GIS II:** Principles of GIS: Data Acquisition, Analysis and Visualization
- Applied Trigonometry, Statistics and Survey –or–
- Applied Space Science

Year 3 - Advanced:

- **GIS III:** Applications in GIS and Internships
- Applied Trigonometry, Statistics and Survey –or–
- Applied Space Science

** Recommended Soph/Jr/Sr sequence. Fresh/Soph/Jr by permission*



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Map Your Future!

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Thank you! GTP Industry Supporters:

- Environ Corporation
- Robert Ferguson Observatory
- SSU Physics and Astronomy Department
- NASA Education and Public Outreach
- ESRI (Environmental Systems Research Institute)
- SRJC (Civil Engineering and Surveying Technology Department)
- Parks Land Systems
- Ray Carlson & Associates Inc.
- County of Sonoma Information Systems Department
- City of Santa Rosa
- Cinquini & Passarino Inc. Land Surveying